ntcss

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http://c4iweb.spawar.navy.mil/pmw151/
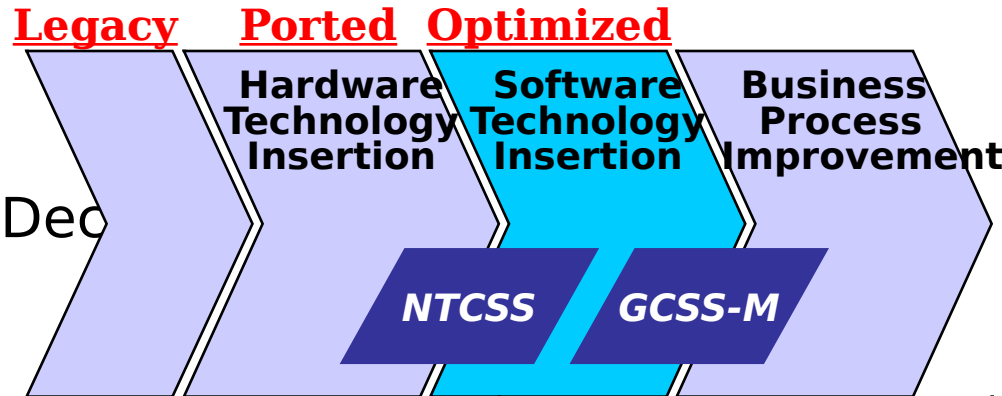
Agenda

- Description
- Role
- NTCSS Applications
- Program Schedule
- Installation Schedule
- Vision
- Training

NTCSS (ACAT IAC)

Legacy   **Ported**   **Optimized**

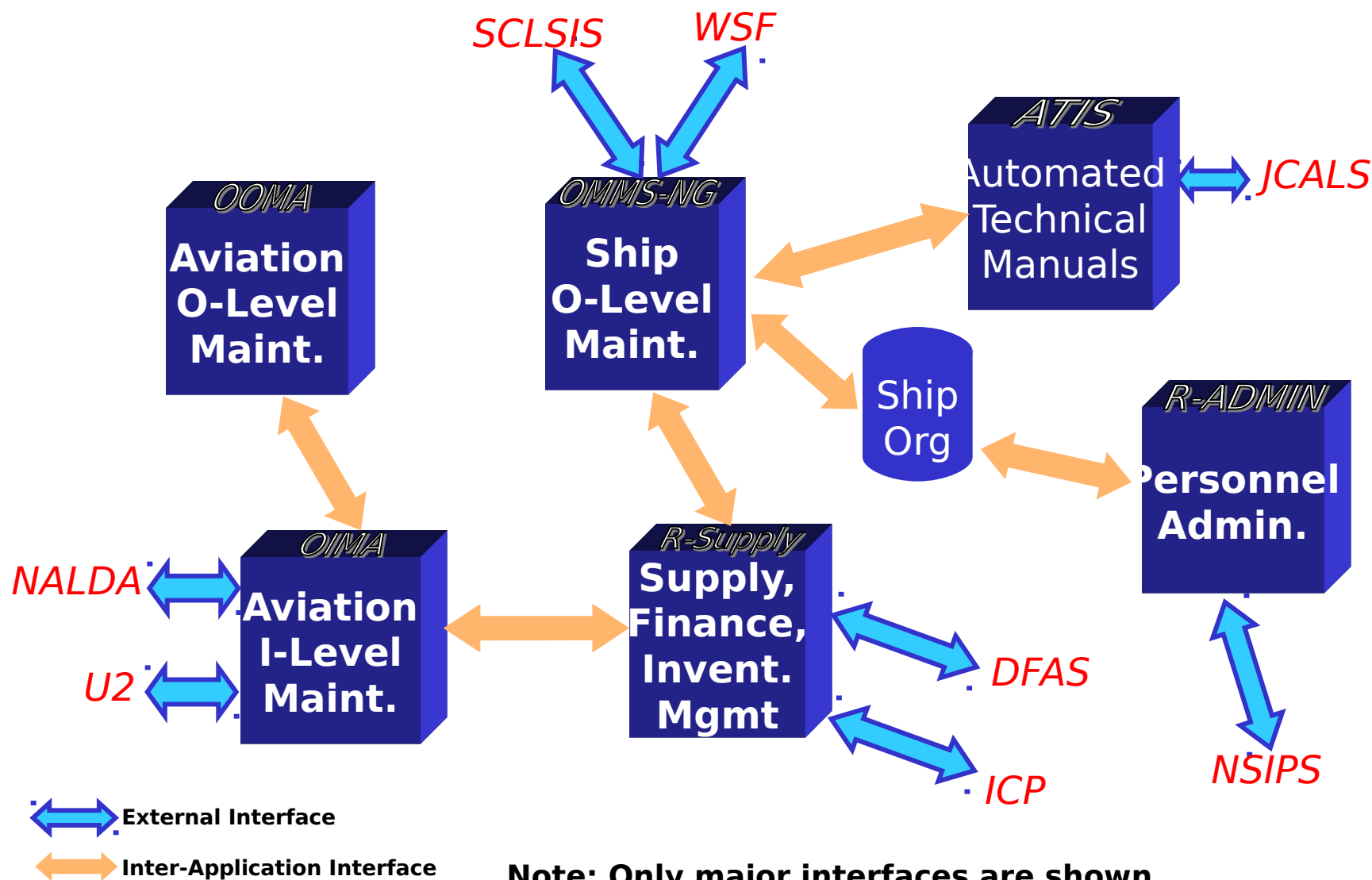Hardware Technology Insertion / Software Technology Insertion / Business Process Improvement

NTCSS   GCSS-M

- Requirement: MNS-27 SEP 94
- Milestone: MSIIIA - 14 SEP 98
- OIMA/RSupply/RADM: MSIIIB - Dec
- OOMA: MSIIIC- Jul 00
- Developer: SSC Chesapeake,
- Hardware procurements: IDIQ
- Basic Description of System:
  - Provides standardized tactical support information systems capability to afloat
    and deploying shore-based fleet activities.
  - Incorporates
    - Aviation, Surface & Subsurface Maintenance
    - Supply, Inventory, Food Service, Retail Sales, Finance
    - Administration, Manpower, Personnel, Medical
  - Building to open system GCSS-M architecture
  - Uses Business Process Improvement (BPI) and Functional Economic Analysis (FEA) to support future enhancements

What is NTCSS?

SPAWAR

SCLSIS   WSF

OOMA
Aviation
O-Level
Maint.

OMMS-NG
Ship
O-Level
Maint.

ATIS
Automated
Technical
Manuals   JCALS

Ship
Org

R-ADMIN
Personnel
Admin.

NALDA

U2

OIMA
Aviation
I-Level
Maint.

R-Supply
Supply,
Finance,
Invent.
Mgmt   DFAS

ICP

NSIPS

⬌ **External Interface**

⬌ **Inter-Application Interface**

Note: Only major interfaces are shown

Unit Level Ships

- R-Supply
- OMMS-NG
- R-ADM
- FSM
- ROM
- SAMS

Force Level Ships

- R-Supply =   Supply/Financial
- OMMS-NG =   Ship/Sub Maintenance
- R-ADM =   Unit Administration
- FSM =   Food Service
- ROM =   Retail Sales
- SAMS =   Medical Administration

Squadrons/MALS

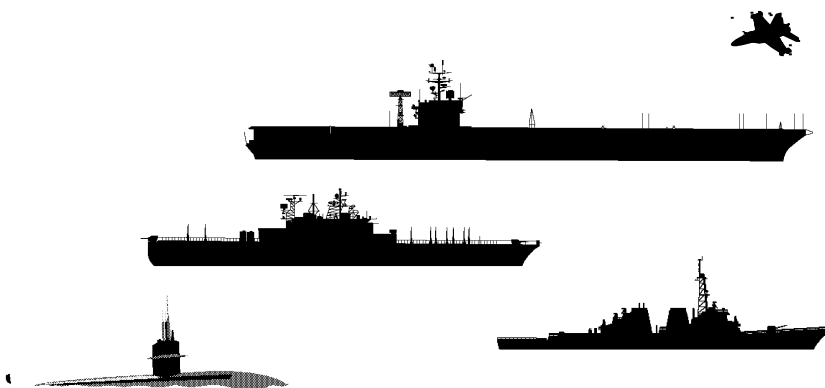- OMA = Aviation Maintenance

Air Stations/MALS

- IMA
- R-Supply
- R-ADM

NTCSS Capabilities

SPAWAR

. . . What NTCSS does:

- ✔ **Supply Support, Inventory & Financial control**
- ✔ **Surface & Subsurface Organizational Maintenance**
- ✔ **Aviation Intermediate and Organizational Maintenance**
- ✔ **Personnel Administration**
- ✔ **Food Service, Retail Sales, Medical Administration**

...versus

. . . What NTCSS does not do:

- – **Logistics Planning**
- – **Theater Transportation Tracking**
- – **Joint Total Asset Visibility (JTAV) Tracking**
- – **Munitions Tracking**
- – **Theater Materiel Tracking**
- – **Theater Medical**
- – **Fuel**
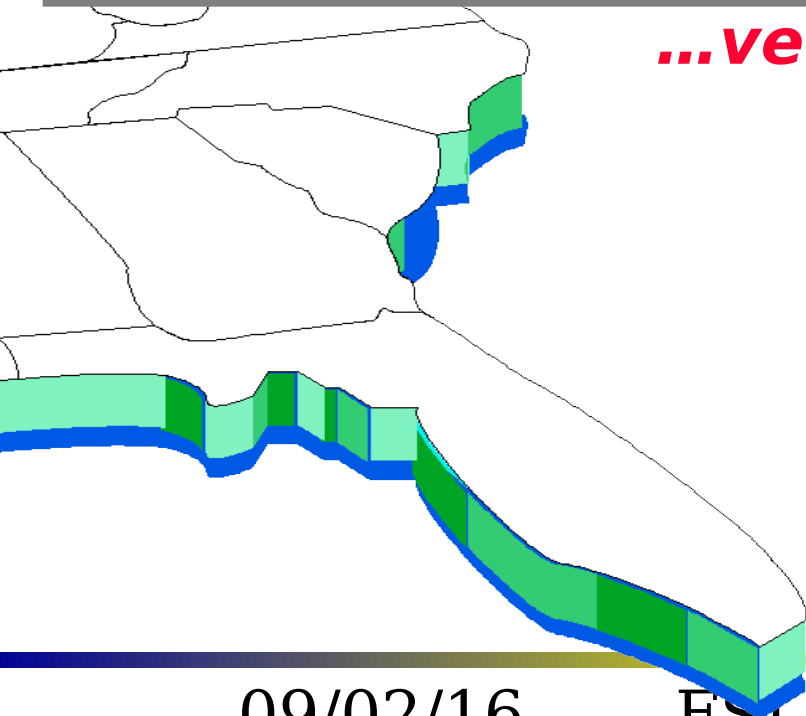
Customer Profile... 1,800+ sites

Afloat

- Carriers (CV, CVN)
- Surface (CG, CGN, DD, DDG, FFG)
- Submarines (SSBN, SSN)
- Amphibious (LCC, LHA, LHD, LPD, LPH, LSD, LST, LCAC)
- Mine Warfare (MCM, MHC)
- Patrol Craft (PC)
- Auxiliary and Support Ships
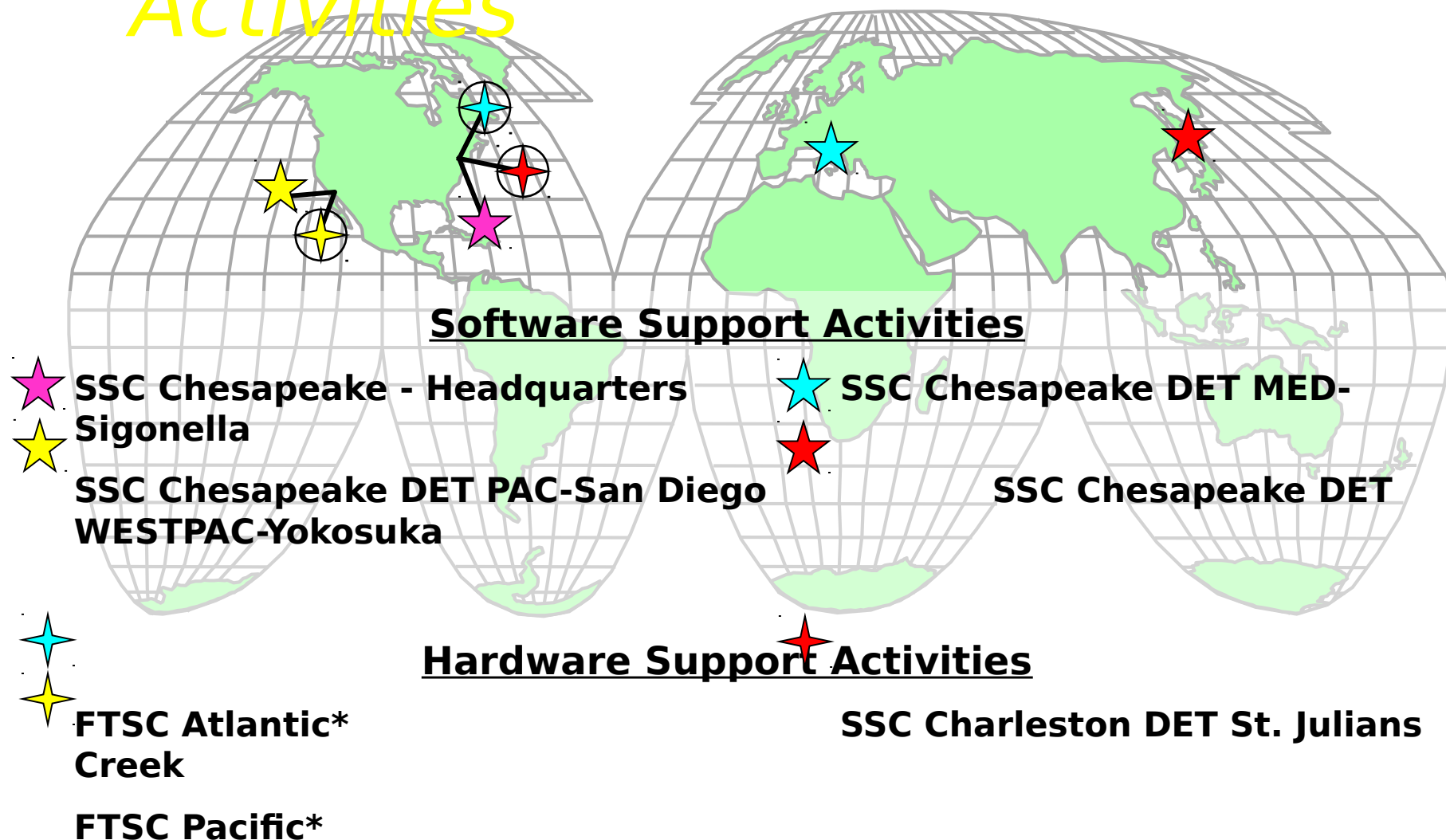- Other (Ironsides, Deep Submergence)

Squadrons, Groups, Teams

- Aviation (Navy, USMC), Surface, Sub, Amphibious
- Marine Aviation Logistics Squadrons SEAL, SPECWAR, DSV, CB, EOD, Fleet Surgical, ASWOC, BMU, etc.

Ashore, Other

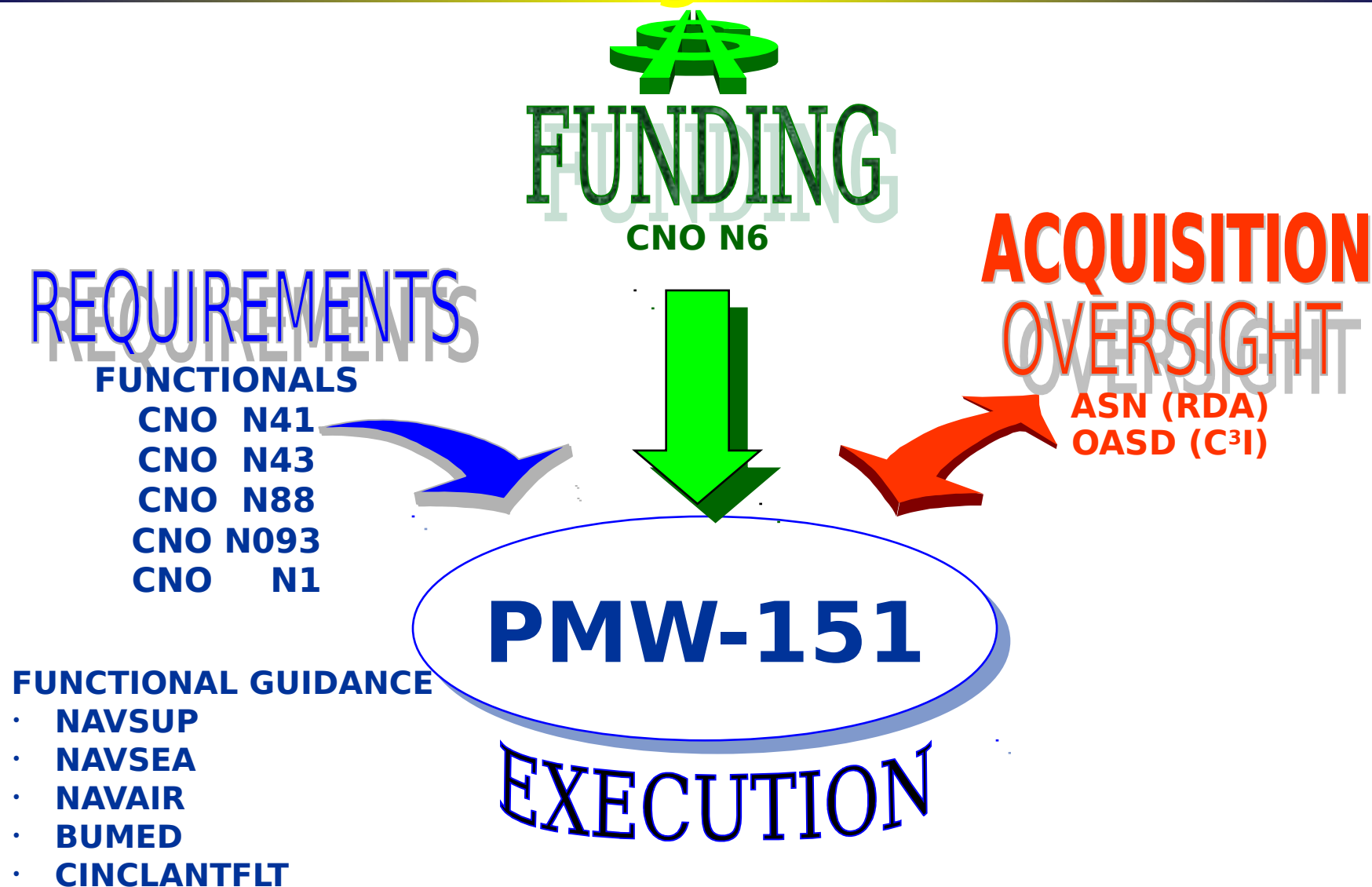- Fleet CINCs, Type Commanders
- Navy & Marine Air Stations & Facilities
- Coast Guard, White House Comm Center, NASA
- Naval Stations, Submarine Bases Weapons Stations
- Schools, Training Facilities
- Medical & Dental Clinics, Hospitals
- Fleet Integrated Logistics Overhaul
- Industrial Supply Centers, Depots
- Supervisor Shipbuilding & Conversion
- Ships Parts Control Center, Aviation Supply Office

Software/Hardware Support Activities

Software Support Activities

⭐ (magenta) **SSC Chesapeake - Headquarters**   ⭐ (cyan) **SSC Chesapeake DET MED-Sigonella**

⭐ (yellow)

SSC Chesapeake DET PAC-San Diego   **SSC Chesapeake DET WESTPAC-Yokosuka**

Hardware Support Activities

✦ (cyan)
✦ (yellow)
FTSC Atlantic*   **SSC Charleston DET St. Julians Creek**

FTSC Pacific*

SPAWAR

FUNDING

CNO N6

REQUIREMENTS

FUNCTIONALS
   CNO   N41
   CNO   N43
   CNO   N88
   CNO N093
   CNO   N1

FUNCTIONAL GUIDANCE
· **NAVSUP**
· **NAVSEA**
· **NAVAIR**
· **BUMED**
· **CINCLANTFLT**

ACQUISITION

OVERSIGHT

ASN (RDA)
OASD (C³I)

PMW-151

EXECUTION

'Plug-in' Software Architecture

NTCSS Segments

NTCSS Common Segments

Database

OS & Comm Protocols

Hardware

Stacked software architecture columns: R ADM, OMMS NG, NALCOMIS, R Supply, NALCOMIS, ATLAS, Future BPI, ATIS — with labels ORG, IMA, OMA.

AdHoc Query

SyBase RDBMS

DII COE/NTCSS Desktop

UNIX, Windows NT O/S

DB Servers, NT Servers & Clients
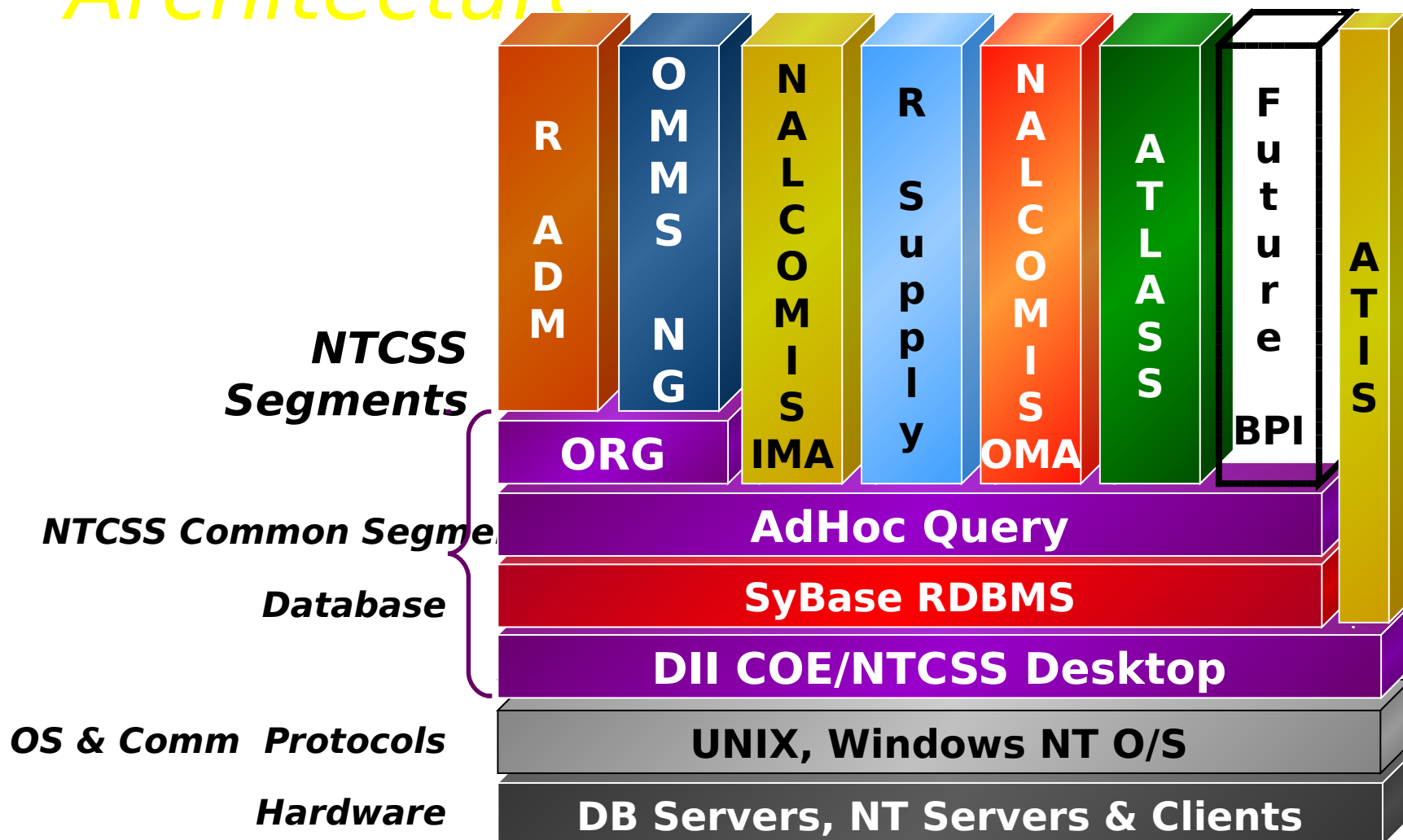
Relational Supply

- Provides:
  - Supply control
  - Requirements processing
  - Parts ordering and tracking
  - Inventory management
  - Financial management
- Interfaces with OMMS-NG and NALCOMIS IMA to process immediate issues of stocked items and off-ship ordering of Not-In-Stock material.

Relational Supply

A Relational Supply Window

SPAWAR

Relational Supply

File Edit Site Inv Log Fin Qry Custom Actions Window Help

Stock Query

All info for a stock item available in one place

NSN	SMIC	Part Number
7920 - 002051711		

Repairable Item Codes   Family Group Management

Deleted/Superseded NIINs   Stock/DTO Dues   Demand   Allowance Part List Nbrs

Stock Items   Limited Stock Items   Part Numbers   Substitutes

Cog: 9Q MCC: UI: BL   Nomenclature: BAGS, WIRING   ATC: 1

UP: 1.50 NUP: .00 Total OH Qty: 200 Location: KEN1

RO: 260 RP: 259 Subs: 000012593

Dates
DINV: 09 FEB 1998
DIE: 22 JUN 1996
DLP: 01 JAN 1900

Codes
LMC: PMIC: SMCC:
TSC: ARRC: Demil: A
SLC: 0 SLAC: 00 IRC:
CIIC: U Inv: RIP:
ADPE: ERC: C OST:

Qty/Indicators
AMD:
DBI: N Limit: N
No Drop: N FILL: N
SEAMART: N
Allowance:

FGC: FRC: MSP Ind: N   REC: N   Pkup Ind: N   PEB: N

Management Data   Management Qty

Ready   SQ5005CA (98040) 09 FEB 1998 16:02 dzalud SNAP1

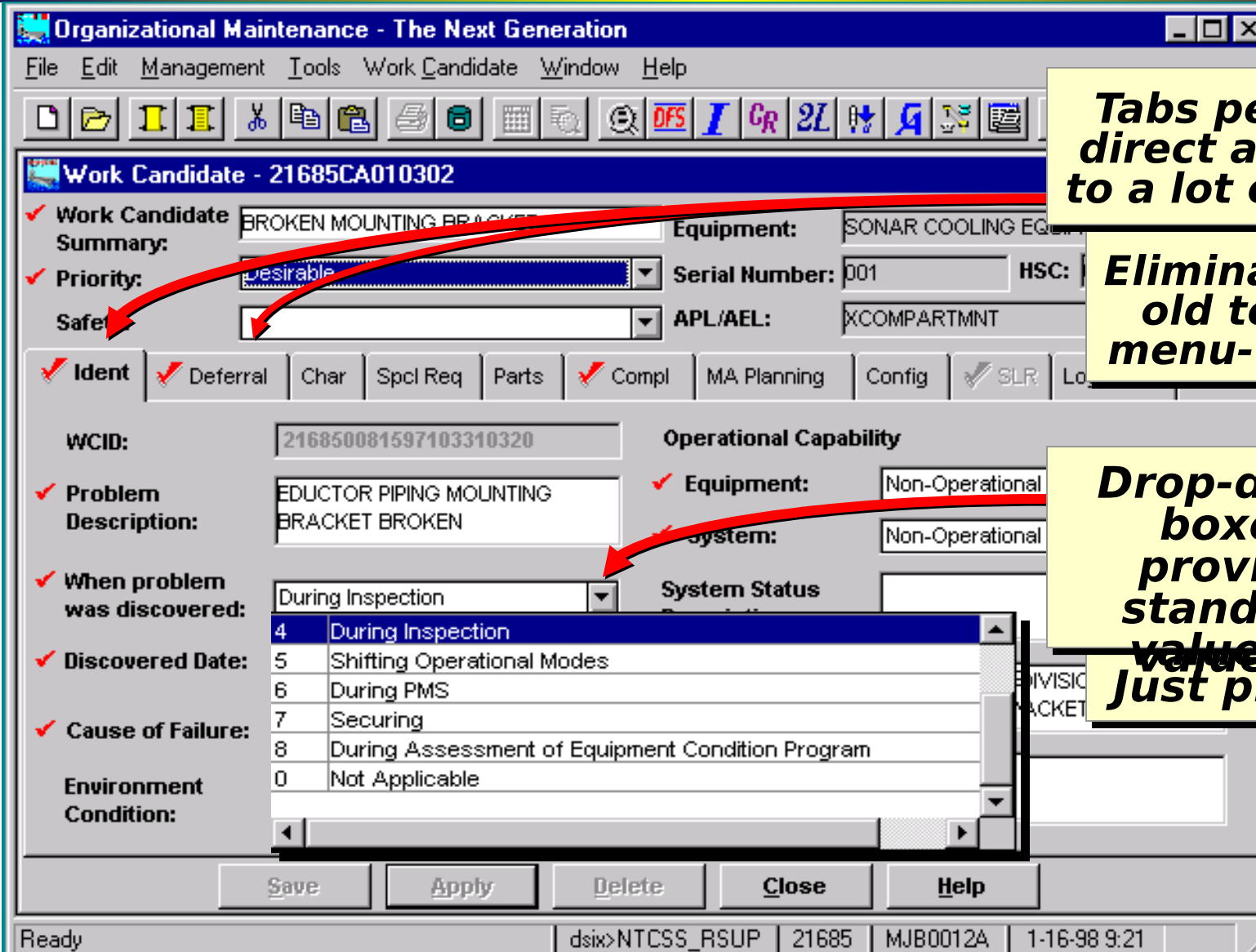# *Shipboard Organizational Maintenance*

- Automated management of:

  – Shipboard organizational-level corrective maintenance actions (work candidates)

  – Current Ship's Maintenance Project (CSMP)

  – Allowance Parts Lists (APL)

  – Consolidated Shipboard Allowance List (COSAL)

  – Production management system tracking all shipboard repairs

OMMS-NG

Organizational Maintenance Management System - Next Generation

An OMMS-NG Window

NTCSS Program Schedule

FY94	95	96	97	98	99	00	01
02	03	04	05				

▲ MS 0-Apr95   ▲ MS IIIA

▲ MS I- Jun96   ▲ MS IIIB

▲ MS II- Mar97   ▲ MS

▲ MS **Le**

Ported SNAP I/II

Emulated NALCOMIS IMA and LANs

NALCOMIS OMA

MRMS

COTF FOT&E

USS George Washington (CVN-)

Optimized

R-Supply	Fielding/Deployment
OMMS-NG	Fielding/Deployment
R-ADMIN	Fielding/Deployment
NALCOMIS IMA	Fielding/Deployment

Hardware

Software Development

NTCSS Notional Installation *Schedule*

| Oct — Site	Install	Nov — Site	Install	Dec — Site	Install
CVN 73 George Washington	Full	LSD 48 Ashland	Full	AGF 3 LaSalle	Backft
DIEGO GARCIA	Full	NAS Brunswick	Full	LPD 13 Nashville	Backft
SSN 770 Tuscon	Full	LHA 2 Saipan	NTCSSII	LPD 6 Duluth	Full
NSTCPAC Pearl Harbor	Full			ILO Pearl Harbor	Full
ILO San Diego	Full				

Jan — Site	Install	Feb — Site	Install	Mar — Site	Install
DDG 78 Porter	Backft	LHA 4 Nassau	Backft	FFG 52 Carr	Full
SSN 700 Dallas	NTCSSII	SSN Albuquerque	NTCSSII	SSN Wyoming	NTCSSII
CG 52 Bunker Hill	Full	CVN 72 Abraham Lincoln	Full	FFG 37 Crommelin	Full
LSD 36 Anchorage	Full	ILO Yokosuka	Full	DD 992 Fletcher	Full
MALSEK	NTCSSII	ILO Sasebo	Full	ILO Puget Sound, Wa	Full

Apr — Site	Install	May — Site	Install	June — Site	Install
NAS JRB Fort Worth	Full	DDG 57 Mitscher	Full	Subschol Groton	Full
CVN 75 Harry S. Truman	Backft	DDG 51 Arleigh Burke	Full	ILO Groton	Full
CG 56 San Jacinto	Full	DDG 79 Oscar Austin	Full	ILO Jacksonville	Full
LSD 37 Portland	Full	DDG 54 Curtis Wilbur	Full	CG 58 Philippine Sea	Backft
DD 978 Stump	Full	LCC 19 Blue Ridge	Backft	DDG 80 Roosevelt	Full
DDG 60 Paul Hamilton	Full	AGF 11 Coronado	Backft	LPD 8 Dubuque	Full
CG 70 Lake Erie	Full	NAWC Pt. Mugu	Full	CG 49 Vincennes	NTCSSII
CG 53 Mobile Bay	Backft				
LHA 1 Tarawa	NTCSSII				

July — Site	Install	Aug — Site	Install	Sept — Site	Install
CVN 65 Enterprise (IOC 6)	Backft	LHD 3 Kearsarge	Full	NAS Sigonella	Full
SSN 719 Providence (First Subla	Full	FFG 47 Nicholas	Backft	ILO Ingleside Tx	Full
LSD 50 Carter Hall (IOC12)	Full	LPD 15 Ponce	Full	DD 982 Nicholson	Backft
DDG 71 Ross (IOC31)	Backft	LCC 20 Mt. Whitney	Full	DD 988 Thorn	Full
DDG 56 John S. McCain	Backft	LHD 4 Boxer	NTCSS II	MALS 26	Full
CG 59 Princeton	NTCSSII	LPD 10 Juneau	Backft	CG 65 Chosin	Full
LSD 43 Fort McHenry	Backft	CG 63 Cowpens	Full	FFG 51 Gary	Full
CVN 70 Carl Vinson	Full			DDG 77 OKane	Backft
LSD 49 Harpers Ferry	Full			DDG 63 Stetham	Full
				DDG 65 Benfold	Full

Vision - Single Supply System

- Significantly reduces cost of maintaining separate Retail and Wholesale versions of R-Supply

R-Supply (Force)
NWCF
Life Cycle Costs
& User Training
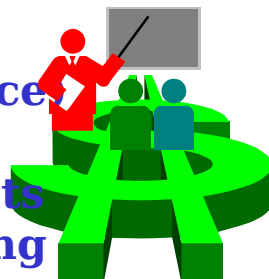
R-Supply (Unit)
End Use
Life Cycle Costs
&User Training
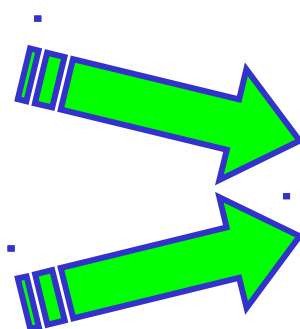
One Supply/NWCF
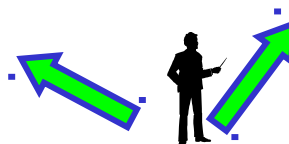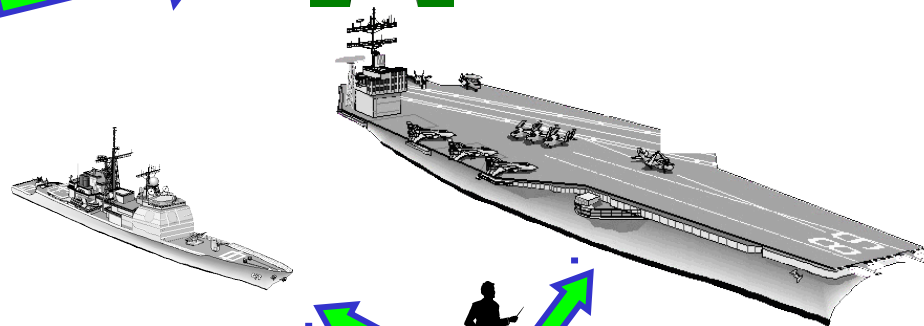
One Supply SK/AK

- Simplifies
  - Training
  - Documentation
  - SK assignment - Sea/Shore r
  - SK/AK ratings merger

Lack of Development Funding is a Challenge

OMMS-NG

PMS Sched   **SOMS**

MRMS

Total Shipboard Maintenance Awareness

Integrated Solution

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Naval Tactical Command Support System

http://c4iweb.spawar.navy.mil/pmw151/

NTCSS IPT

Date: 2-3 June 1999

SPAWAR PMW 151 held:

- Review different training methods, OLPS, CBT, Embedded help.
- Identify specific training needs for NTCSS.

NTCSS IPT

**SPAWAR PMW 151
needed to:**

- **Conduct a Front End Analysis (FEA)**

- **Build an overarching NTCSS Naval training Support Plan (NTSP)**

- **Train the trainer's: Involve them in the development of application to better prepare them for training**

TSA Background

Task Received: 23 August, 1999

SPAWAR PMW 151 Provided:

- **FCA&M with identified sites and dates**
- **Suggested questions for SMEs at various sites**

NAWCTSD developed initial TSA outline (MIL PRF 29612)

- **Outline approved by SPAWAR PMW 151**

Purpose

- **Investigate training from the perspective of transition from legacy NALCOMIS to Optimized NALCOMIS which is being installed in the OOMA and OIMA**

- **Provide recommendations for:**
  - **Curriculum development requirements**
  - **Placement of course structure ("A" or "C" school)**
  - **Usable media**
  - **"in service training" elements**
  - **Manpower issues that surface**
  - **Additional hardware or network training needed**
  - **Top and Mid Tier training requirements**

Assumptions

- Adequate training documentation is available for review:
    - NALCOMIS ORD (legacy & optimized)
    - NALCOMIS NTSP (legacy & optimized)
    - NALCOMIS JTA (legacy)
    - CTTL/COI for AZ/AK "A", "C", "F" school courses associated with teaching legacy NALCOMIS
- Functional definitions of Legacy and Optimized NALCOMIS
- Job descriptions for individuals using legacy and optimized NALCOMIS
- Technical users documentation for optimized NALCOMIS

Site Visits:

- **NAS Patuxent River (Rotary Wing, NAVAIR 3.6.1/3.6.2, AIMD)**
- **MCAS New River (MALS 29)**
- **Norfolk (AIRLANT, AIMD, SSCC, FTC, FASO)**
- **San Diego (AIRPAC, AIMD, FASO)**
- **Washington DC (OPNAV N889H)**
- **NAS Pensacola (AZ/AK "C" School)**
- **NAS Meridian (AZ/AK "A" School)**

Rapid evolution of NALCOMIS was driven by improvements in computer technology - primarily hardware

No government role

Contract or Assist

Legacy Funct Defined
Job Description Inconsistent w/ NAMP

Roles/Functions?

Contractor → **Sailor/ Marine** → **SA/DBA** → **Optimized SA/DBA**

Mainframe → **PC** → **Client Server** → **NTCSS Client Servers**
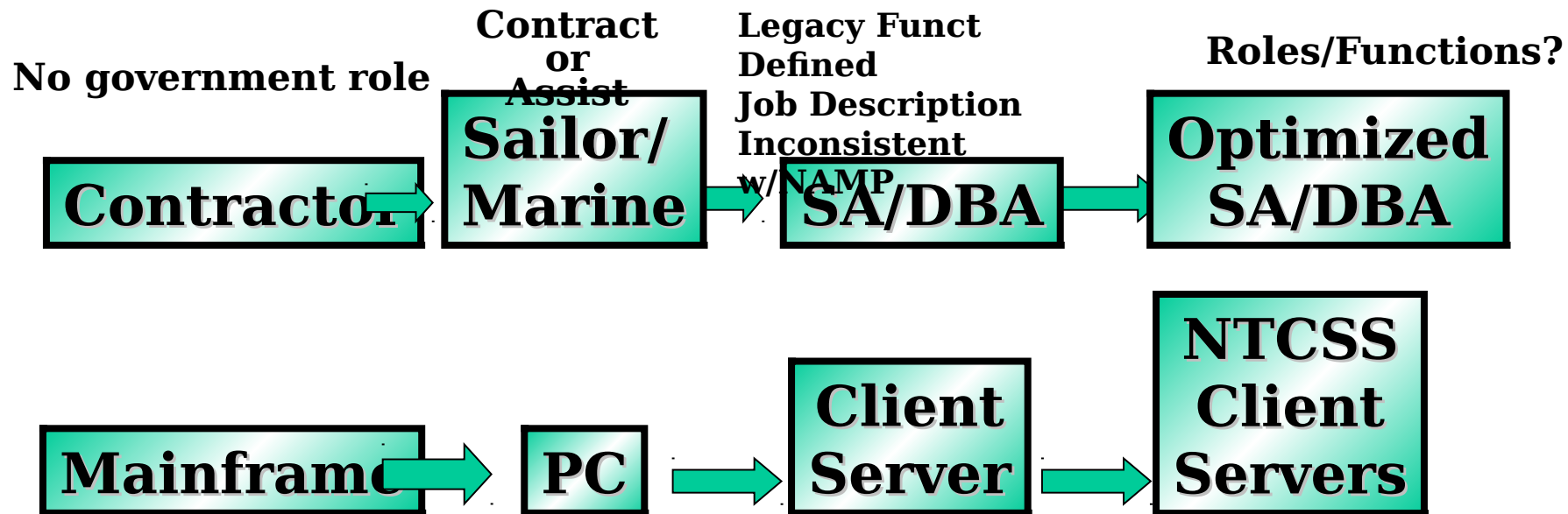
Impact 1.1

Lack of formally assigned roles & responsibilities (lack of training infrastructure) is having an impact on the effectiveness & efficiency of NALCOMIS training

Recommendation 1.1

• Develop organization/project roster

- All Government, Military, Contractor POCs
- Define their specific responsibilities
- Distribute roster to fleet & training offices.

Apparent lack of formal decision making board to govern NALCOMIS training policy

Recommendation 1.2

- **Establish a NALCOMIS Training Advisory Review Task Analysis Working Group**
- **Provide overall NALCOMIS technical training policy and guidance**
- **Benefit is to provide direction and control**

There is no formal Job Task Analysis (JTA) documentation for legacy or optimized NALCOMIS (officers/enlisted).

Recommendation 1.3

- Perform a formal JTA and develop JTA report
- Use report to determine who, what, where, when and how training will be provided

- **Schedule for installation of Optimized NALCOMIS appears to be in constant change**

- **Formal schools are not included in distribution of new software releases**

- **Help section of the different software versions appears to be inconsistent with new versions**

Lack of formal implementation schedule is causing software configuration management problems in fleet and creating problems in providing *valid* training to fleet.

Recommendation 2.1

- **Include schoolhouses in distribution of a formal milestone chart of software releases**
- **Include AZ/AK "A" and "C" schools in pilot review of software.**
- **Connect the AZ/AK "A" and "C" school electronically to SSCC enabling schools to be kept current with the Optimized NALCOMIS development**
- **Equip AZ/AK "A" and "C" school classrooms with state of the art technology (electronic classroom environment) in order to provide effective and efficient instruction. Technology in AZ "C" classrooms should include NALCOMIS servers for more realistic instruction,**

Impact 2.2

NALCOMIS "embedded help" proposed by SSCC must be developed/maintained from an Instructional Systems Development (ISD) perspective

Recommendation 2.2

- **NALCOMIS Training Advisory Working Group establish a "New Training Development Committee" to coordinate the efforts of the curriculum developers at the formal schools and the software developers at SSCC. This will facilitate an integrated ISD approach to tutorials.**

SPAWAR

Training organizations (formal and in-service schools) are not receiving appropriate feedback from fleet regarding <u>content</u> of course training materials. This affects *validity* of training.

Recommendation 2.3

- **NALCOMIS Training Advisory Working Group establish feedback procedure/mechanism to schools from fleet in timely manner to accommodate prototype software changes**

Recommendations

- **NALCOMIS is one application within NTCSS**

- **Training in other applications also lack training continuity**

- **TSA be done on highest priority, in order to identify problems affecting training effectiveness/efficiency**

- **Insure training infrastructure, job task analysis are conducted for all applications**

SUMMARY

- Acting on TSA recommendations would:
  - providing a strong foundation (JTA) upon which to build courseware
  - providing an "updated training audit trail"
  - defining individual roles & responsibilities

- Accepting the TSA recommendations would:
  - allow for training material/documents to be "backfitted"
  - produce an effort that could be accomplished in a more effective & shorter time frame
  - allow a "team effort" of SMEs to provide a content validity check of training material
  - allow training design/development to be

Points of Contact

Code/Position	Name	Phone Number
PMW 151 Program Manager	CAPT Speer Ezzard	(619) 524-7553
PMW 151A Deputy Program Manager	Ms. Susan Linn	(619) 524-7555
PMW 151-1 Customer Liaison Div.	CDR Allen Booker	(619) 524-7961
PMW 151-2 System Acq. and Eng.	Mr. Sam Anderson	(619) 524-7564
PMW 151-3 Functional Requirements	LCDR Mike Kelly	(619) 524-7566
PD 15L Logistics Coordinator	Mr. Mike Crow	(619) 524-7545
PMW 151-4 Program Development Div	Mr. Mike Taousakis	(619) 524-7543

http://c4iweb.spawar.navy.mil/pmw151/

ntcss

Backup Slides

Naval Tactical Command Support System

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PD15 Organization

SPAWAR

PEO IT

PD15 Front Office

DoN IT Umbrella Programs PD 15Q Ms. Nikki Isfahani

Ashore Networks & Messaging	GCS-M			IT21 Networks	ATDLS
Naval Messaging Systems (NMS) Program Office PMW 152 CAPT Bill Bry	**Naval Tactical Command Support Systems (NTCSS) Program Office PMW 151 CAPT Speer Ezzard**	**Theater Medical Information (TMIP) Program Office PMW 154 CAPT Prima Morris**	**Navy Command and Control Systems Program Office PMW 157 CAPT Mike Gehl**	**Naval Integrated Networks Program Office PMW 158 Mr. Tim Smith**	**Advanced Tactical Data Links Program Office PMW 159 CAPT Ronald Polkowsky**

PD15 Focus Areas

- Afloat network "utility" - "The network is the computer"
  - ISNS/ADNS
  - Servers/PCs
  - Expansion (with control)
- Application bookshelf - application icons
  - Functionality "catch-up"
  - Targeting support
- Link-16 acceleration

Future Afloat LAN Design Tenets

- **LAN Backbone as a Utility**
  - Support LAN Expansion for Internal/External Customers
    - Easy Expansion of Utility (Backbone / Edge Switches / Drops)
    - Provide Clear/Easy Guidance on Expansion/Changes
- **Core Services to support as needed**
  - VVD, HM&E, PBX, SMARTSHIP
  - Network as a service, not a stand alone system
- **Standard Configuration, Same Hardware and Software across BG/ARG**
  - Force Level/Command Ships Backbone Configuration
  - Shooters/Amphib Ships Backbone Configuration
  - Unit Level Ships Backbone Configurations
  - Use of low cost switch to meet expansion requirements

New LAN Design

CVN Unclassified

Port Count			
Type	Required	Available	Open
OC-12 (Single Mode)	16	32	16
Ethernet (10FL)		64	
*Ethernet (10/100T)		2880	

*Includes (11) 4024 Stackables connected to each Edge Switch

———— OC-12 SM Fiber

———— 100BaseTX (Copper)

Links logically trunked together via Omni-Channel

x11
4024

x11
4024

ES1-9W
MPM-1GW-56MB | FCSM-2 | CSM-622-2EW | CSM-622-2EW | ESM-FM-16W | ESM-100C-32W | ESM-100C-32W | ESM-100C-32W

ES2-9W
MPM-1GW-56MB | FCSM-2 | CSM-622-2EW | CSM-622-2EW | ESM-FM-16W | ESM-1000C-32W | ESM-1000C-32W | ESM-1000C-32W
HRE Installed

ES3-9W
MPM-1GW-56MB | FCSM-2 | CSM-622-2EW | CSM-622-2EW | ESM-FM-16W | ESM-1000C-32W | ESM-1000C-32W | ESM-1000C-32W
HRE Installed

ES4-9W
MPM-1GW-56MB | FCSM-2 | CSM-622-2EW | CSM-622-2EW | ESM-FM-16W | ESM-1000C-32W | ESM-1000C-32W | ESM-1000C-32W

4024
x11
100BaseTX

OC-12

OC-12

OC-12
100BaseTX

100BaseTX
X

100BaseTX
X

Servers x 8

OC-12

4024
x11
100BaseTX

OC-12

OC-12

OC-12

ES5-9W
MPM-1GW-56MB | FCSM-2 | CSM-622-2EW | CSM-622-2EW | ESM-1000C-32W | ESM-1000C-32W | ESM-1000C-32W

ES6-9W
MPM-1GW-56MB | FCSM-2 | CSM-622-2EW | CSM-622-2EW | ESM-1000C-32W | ESM-1000C-32W | ESM-1000C-32W

ES7-9W
MPM-1GW-56MB | FCSM-2 | CSM-622-2EW | CSM-622-2EW | ESM-1000C-32W | ESM-1000C-32W | ESM-1000C-32W

ES8-9W
MPM-1GW-56MB | FCSM-2 | CSM-622-2EW | CSM-622-2EW | ESM-1000C-32W | ESM-1000C-32W | ESM-1000C-32W

4024
x11
100BaseTX

4024
x11
100BaseTX

4024
x11

4024
x11
100BaseTX

6 Empty Slots within Core

14 Empty Slots within Edge

Other NTCSS Applications

- Automated Technical Information System (ATIS)
  - Engineering drawings and tech manuals on CDROM
- Food Service Management (FSM)
  - Mess menu and inventory management
- Retail Operations Management (RO
  - Comprehensive Ship's Store AIS
- Shipboard Automated Medical Sys
(SAMS)
  - Medical management for Independent Duty
- Maintenance Resource Manageme
(MRMS)
  - Ships Intermediate Maintenance Activity (SIM...

Annual Value-Added Benefits

Legacy
Mission Operating Costs

Unit Level $31K	
Small NAS $433K	
Force Level $583K	
MALS $979M	
Large NAS $1,202M	

Benefits

- $9K
- $193K
- $344K
- $614K
- $535K

Optimized
Mission Operating Costs

Unit Level $22K	
Small NAS $240K	
Force Level $239K	
MALS $365K	
Large NAS $667K	
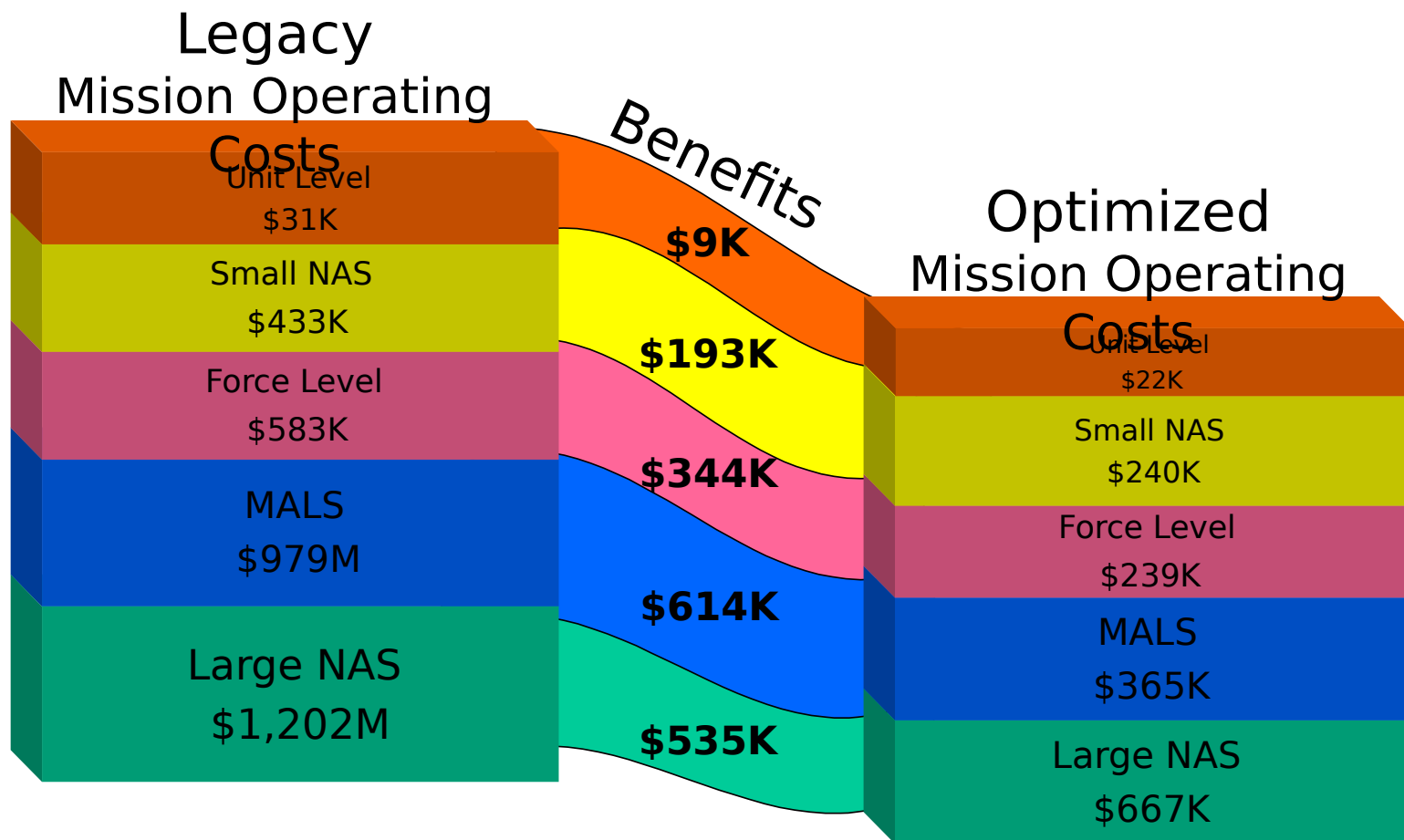
Reflects one activity of each type

Typical task: add a Stock Number
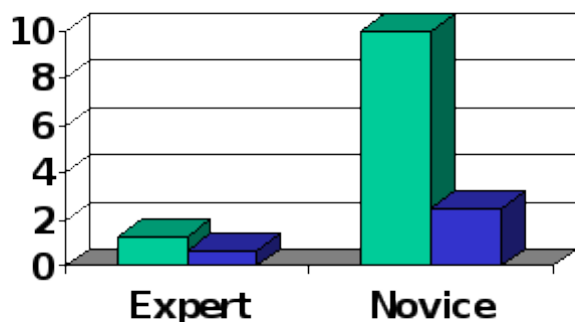
¤ All users are able to work faster

¤ Optimized applications are much more Intuitive

¤ Expert users discover "functionality"

¤ Managers can see information displayed in different ways (graphically)

¤ The help button really helps

Engine Analysis Scenario

¤ Average engine repair turnaround time reduced from 9.75 days to 8.37 days.

¤ 3 more days of sortie generation available to warfighter

¤ 281 additional sorties available
  – 461 additional F/A-18 flight hours

...1.67% increase in the number of sorties available based on analysis of engine repair cycles

Automated Maintenance Environment Goals

- Provide Modern, Flexible Information System Infrastructure for Aviation Squadron Maintenance Environment
  - "Plug and Play" of Weapons System Peculiar Software
  - Graphical Common User Presentation
  - Improve Accuracy of Tactical Support Data
  - Make Data More Available to Fleet User and Manager
- Provide Data to Squadron Maintenance for More Efficient On-Aircraft Maintenance and Off-Aircraft Production Management
  - Automation of Maintenance and Technical Data From Aircraft
  - Use Weapon System Software for Diagnostics and Prognostics
  - Incorporate Interactive Electronic Technical Data.
- Initial AME Capabilities Demonstrated in AMIDD
  - A DARPA funded effort

O-LEVEL AME Notional

SPAWAR

IDE (NALDA)

Memory Unit

Pilot and Maintainer Observables

Diagnostic, Training, IETM & Supply Data

AIT

Data Download

Debrief Diagnostic

PEDD

Naval Flight Record

Maintenance Data
Flight Data

IETM Training & Maintenance Data

MAF Fault Definition Data

Work Center Functions

Training & Maint

Maintenance Mgmt & Control

Task Status (Automated)

AIT

Configuration Changes

IETM Interface

Document Maint. Actions & Configuration Changes

Inspections

Quality Assurance

Platform Specific S/W Modules
(engines, structures & other Diagnostics/Prognostics)

NALCOMIS   IDE   Platform Specific S/W

LIC 17 March   47

Naval Aviation System of Systems

NALCOMIS
"O" Level / "I" Level

Mirror Site - NORIS

IDE

N-6/PMW-151

Automated Logbook

Serial Number Tracking

Configuration Status

Maintenance Flags

Readiness Information

Top Tier

Data Replication

IDE

Other

Available

Logistics

Data

LMDSS

AIRRS

NALDA

CM / CMIS

AEMS

Tools

Configuration Status

Readiness Status

Inventory Status

Flight Hours

Life Consumption

Condition Evaluation

Serial Number Tracking

BOM

Maintenance Feedback

N-88/AIR-6.0

MRP II / DMDS

Depot

N-88/AIR-3.0

Commercial / OEMs

NATEC

OPNAV

TYCOM

NAVICP

PMA / FST / IPT

THE PENTAGON
WASHINGTON

NTCSS/OOMA Data Replication

Shipboard Activities

Shore Activities

OMA
- DB | REP
- SQ | AGENT

IMA
- DB | REP
- SQ | AGENT

R-Supply OMMS-NG R-ADM
- DB | REP
- SQ | AGENT

Mid-tier Server
- DB | REP
- SQ | SERVER

Joint Total Asset Visibility (JTAV)

Navy Inventory Control Point (NAVICP)

NALDA/OMA (sends configuration data to IDE)

Integrated Data Environment (IDE)

Network Operating Centers Firewall

Data Warehouse

Top-tier Server
- DB | REP
- SQ | SERVER

Navy Data Environment (NDE)

Type Commanders (TYCOMs)

CDMD-OA (Configuration Data)

RM AIS (Regional Work Broker)

DB = Data Base
SQ = Stable Que
Rep Agent = Replication Agent

- ------→ = IMA (Future)
- ·······→ = R-Supply & R-ADM
- (Future) ·—·—·→
- ————→ = OMMS-NG (Future)
- ————→ = OMA (Complete)

Note: All systems left of the dotted line are shipboard.

Evolution of GCSS-M

Logistics Planning

Theater Materiel Tracking

Theater Transportation Tracking

Theater Medical (TMIP)

DII COE Level 7

NTCSS

GCSS-M

ECI/EDI NAVSUP

US Marines (ATLASS II +)

Personnel (NSIPS)

Joint Total Asset Visibility (JTAV)

Munitions Tracking

Fuel
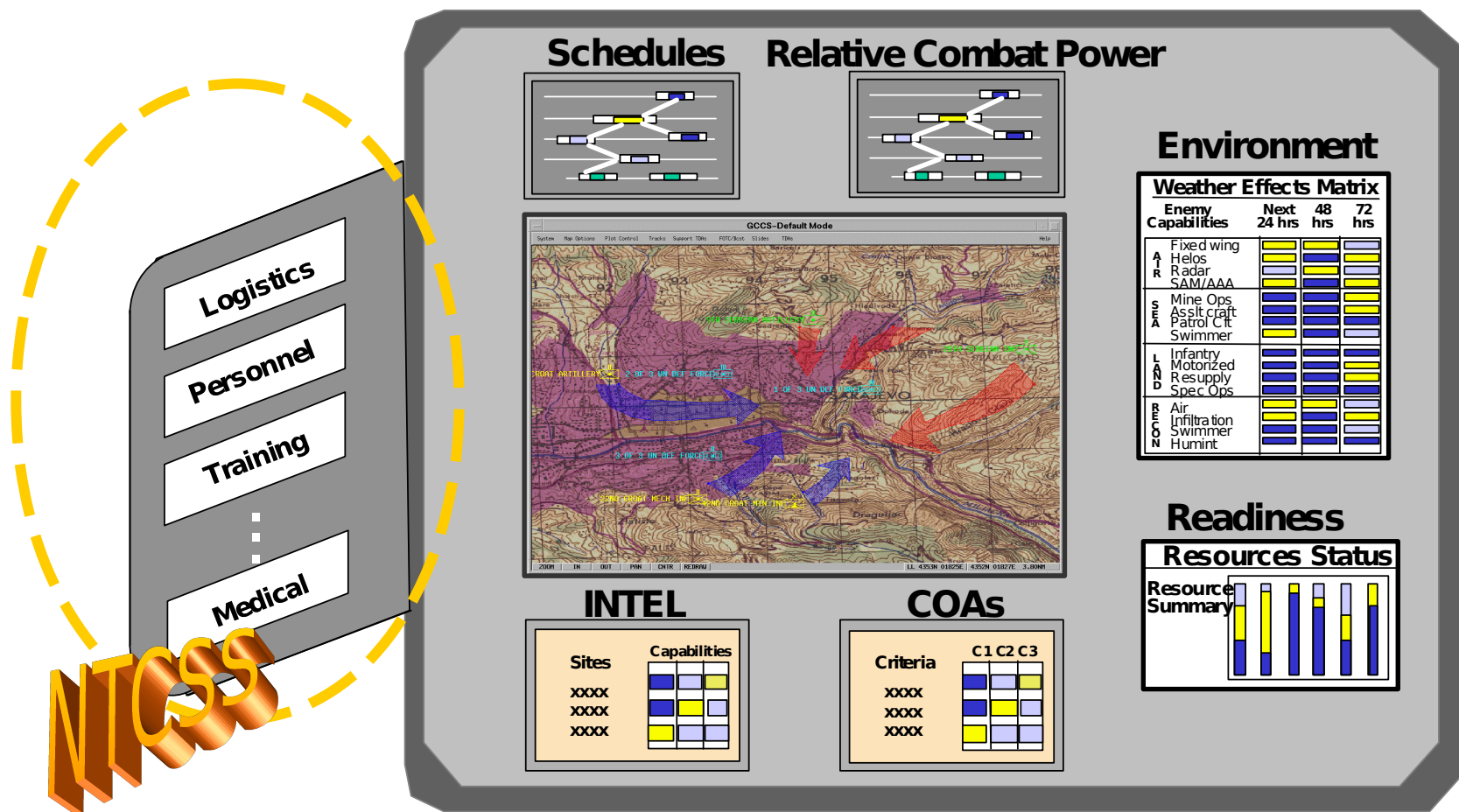
GCSS-M Sponsor: CNO N4

Common Operating Picture (COP)

**Information for the warfighter
Access to Integrated Information From A Single Window**

Schedules   Relative Combat Power

Environment

Weather Effects Matrix

Readiness

INTEL   COAs

Logistics
Personnel
Training
Medical

NTCSS

Statement of Operational Requirements for the GCSS

Provides Information Technology (IT) Capability for:

- **Total Asset Visibility**
- **Deployment/Redeployment, Force tracking & Sustainment**
- **Collaborative Course of Action (CCOA) Analysis**
- **Personnel, Health Protection, and Financial Analysis**
- **Visualization of the Battlespace**
- **Execution Monitoring and Analysis**
- **Mobilization and Force Reconstitution Analysis**
- **Miscellaneous (Ad Hoc Query) & a deployable GCSS capability   that interfaces with GCCS**

NTCSS currently not GCSS-M.

- **Of the 129 GCSS CINC Requirements, NTCSS fullfills 20%**